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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,431	08/24/2004	Katsutoshi Moriyama	SON-2624	1635

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WASHINGTON, DC 20036

EXAMINER
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ELAND, SHAWN

ART UNIT	PAPER NUMBER
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2188

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/505,431	Applicant(s) MORIYAMA ET AL.	
	Examiner Shawn Eland	Art Unit 2188	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2006 & 27 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/25/06 &amp; 11/29/06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Formal Matters***

This Office action is in response to the Applicant's response filed November 27, 2006.

### ***Status of Claims***

Claims 1 – 13 are pending in the Application.

Claims 1, 3, 5, & 7 have been amended.

Claims 2, 4, & 6 are cancelled.

Claims 8 – 13 are new.

Claims 1, 3, 5, & 7 – 13 are rejected.

### ***Information Disclosure Statement***

The information disclosure statements filed August 25, 2006 and November 29, 2006 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. The Japanese Office action is cited in the IDS as No. 2002-079529, but the Office action submitted was 2002-079528.

The information disclosure statement filed August 24, 2004 still fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

According to Applicant's arguments filed on November 27, 2006, English translations of the references cited were furnished. However, they have not. There is no record of the English translations of these references (JP 59-135698, JP 7-65586, and JP 9-63286) on file.

### ***Response to Arguments***

Since all claims are cancelled, amended, or new, all arguments regarding the original claims are moot.

### ***Claim Rejections - 35 USC § 112***

The Examiner withdraws his 35 U.S.C. 112 2<sup>nd</sup> paragraph rejection of original claim 2 since it has been cancelled.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 7 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by **Searby** (US 5,412,402).

In regard to claim 1, Searby teaches a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element (**see element 13**), and configuring so that, in said comparison section, in a case where said exiting data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data and said new data are not identical with each other, said new data is written to said storage element (**see column 7, lines 34 – 38;**); and characterized by provided with a control signal generating section for generating a readout control signal for performing readout control of said existing data and a write control signal for performing write control of said new data (**the control signal generating section, while not shown, must exist in order for the circuit to know when to read control image data  $K$  and brush coefficient  $K_B$** ), and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with said write control signal from said control signal generating section (**see column 8, lines 13 – 17**).

Regarding claim 8, Searby teaches wherein said readout control signal and said write control signal are derived from a write signal input to said control signal generating section (**see element 7**).

In regard to claim 3, Searby teaches performing a readout process of existing data stored in a storage element prior to performing a write process of new data to said storage element to compare said existing data and said new data with each other (**see column 7, lines 16 – 21**), so as not to perform the write process to said storage element, in a case where said existing data and said new data are identical with each other, and so as to perform the write process of said new data to said storage element in a case where said existing data and said new data are not identical with each other (**see column 7, lines 34 – 38**); characterized by generating a readout control signal (**the system has to know when to read out the existing data so therefore it is inherent**) and a write control signal (**see column 7 lines 26 – 34**) in accordance with a write signal input (**see element 7**) to said data storage circuit; reading out said existing data in accordance with said readout control signal (**see column 6, lines 3 – 4**); and comparing said existing data with said new data in accordance with said write control signal (**see column 7, lines 34 – 38**).

In regard to claim 5, Searby teaches a comparison section for reading out existing data stored in a storage element to compare said existing data and new data with each other prior to writing of said new data to said storage element (**see element 13**), and configuring so that, in said comparison section, in a case where said existing data and said new data are identical with each other, the writing to said storage element is not performed, and in a case where said existing data and said new data are not identical with each other, the writing of said new data to said storage element is performed (**see column 7, lines 34 – 38**); characterized by providing with a control

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signal generating section (***the control signal generating section, while not shown, must exist in order for the circuit to know when to read control image data K and brush coefficient  $K_B$*** ) for generating a readout control signal for performing readout control of said existing data (***the system has to know when to read out the existing data so therefore it is inherent***) and a write control signal for performing write control of said new data, and by configuring so that said existing data and said new data are compared with each other in said comparison section in accordance with a control signal from said control signal generating section (***see column 7, lines 34 – 38***).

Regarding claim 7, Searby teaches the comparison section is provided with a new data retention section for temporarily retaining the new data (***see element 14***); an existing data retention section for temporarily retaining the existing data (***see element 14***); and a write enable signal generating section for comparing the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other to control an output of the write enable signal (***see column 8, lines 23 – 26***), the new data is temporarily retained in the new data retention section while the existing data is temporarily retained in the existing data retention section in accordance with the readout control signal output from the control signal generating section, and the new data retained in the new data retention section and the existing data retained in the existing data retention section are compared with each other in accordance with the write control signal output from the control signal generating section (***see column 7, lines 34 – 38; see column 8, lines 13 – 17***).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Searby** (US 5,412,402) as applied to claim 8 above, and further in view of **Moyer** (US 6,052,302).

For claim 9, Searby teaches said control signal generating section but does not teach wherein said control signal generating section includes an AND logic gate for generating said readout control signal according to a first readout generation signal and a second readout generation signal. Moyer teaches including AND logic gates. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this embodiment, as it would help minimize power consumption.

Claims 10 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Searby** (US 5,412,402) as applied to claim 9 above, and further in view of **Kunikiyo** (US 2002/0145902).

For claim 10, Searby does not teach wherein said control signal generating section includes a NOR logic gate for generating said write control signal according to a first write generation signal and a second write generation signal. However, Kunikiyo does (*see [0390]*). It would have been obvious to a person having ordinary skill in the



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art at the time the invention was made to use this MRAM, as it would reduce the amount of time taken for batch erasing.

For claim 11, Searby does not teach wherein said new data retention section and existing data retention section include input control transistors for controlling the retaining of the new data and the existing data in accordance with readout control signal. Kunikiyo, however, does (*see [0092]*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this MRAM, as it would reduce the amount of time taken for batch erasing.

For claim 12, Searby does not teach wherein the write enable signal generation section includes output control transistors for controlling comparison of the new data and the existing data in accordance with the write control signal, but Kunikiyo does (*see [0092]*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this MRAM, as it would reduce the amount of time taken for batch erasing.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Searby** (US 5,412,402) as applied to claim 7 above, and further in view of **Moyer** (US 6,052,302).

For claim 13, Searby does not teach wherein the write enable signal generation section includes an XOR logic gate for generating a write enable signal in accordance with the new data and the existing data. However, Moyer does (*see figure 7*). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use this embodiment, as it would help minimize power consumption.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Examiner Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Eland whose telephone number is (571) 270-1029. The examiner can normally be reached on Monday - Thursday from 7:30am to 5:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough, can be reached on (571) 272-4199. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shawn Eland  
03/06/2007

  
HYUNG SOUGH  
SUPERVISORY PATENT EXAMINER

3-16-07